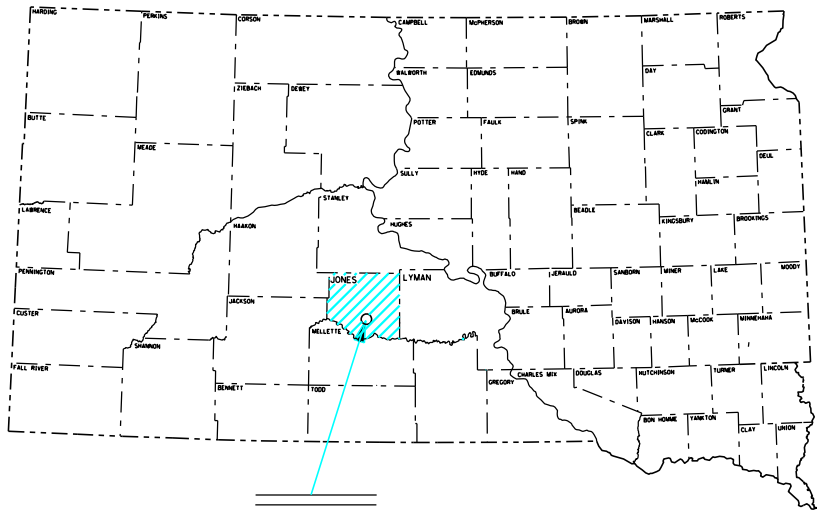


PLOT SCALE - 1:25616.3

PLOTTED FROM - TRW\INT29



PROJECT



WB I90 Chain Link



EB I90 Chain Link

DESIGN DESIGNATION	
INTERSTATE 90 EB & WB	
ADT (2013)	2870
ADT (2033)	3361
DHV	554.6
D	51%
T DHV	12.7%
T ADT	28.0%
V	75 MPH

STORM WATER PERMIT
NO PERMIT REQUIRED

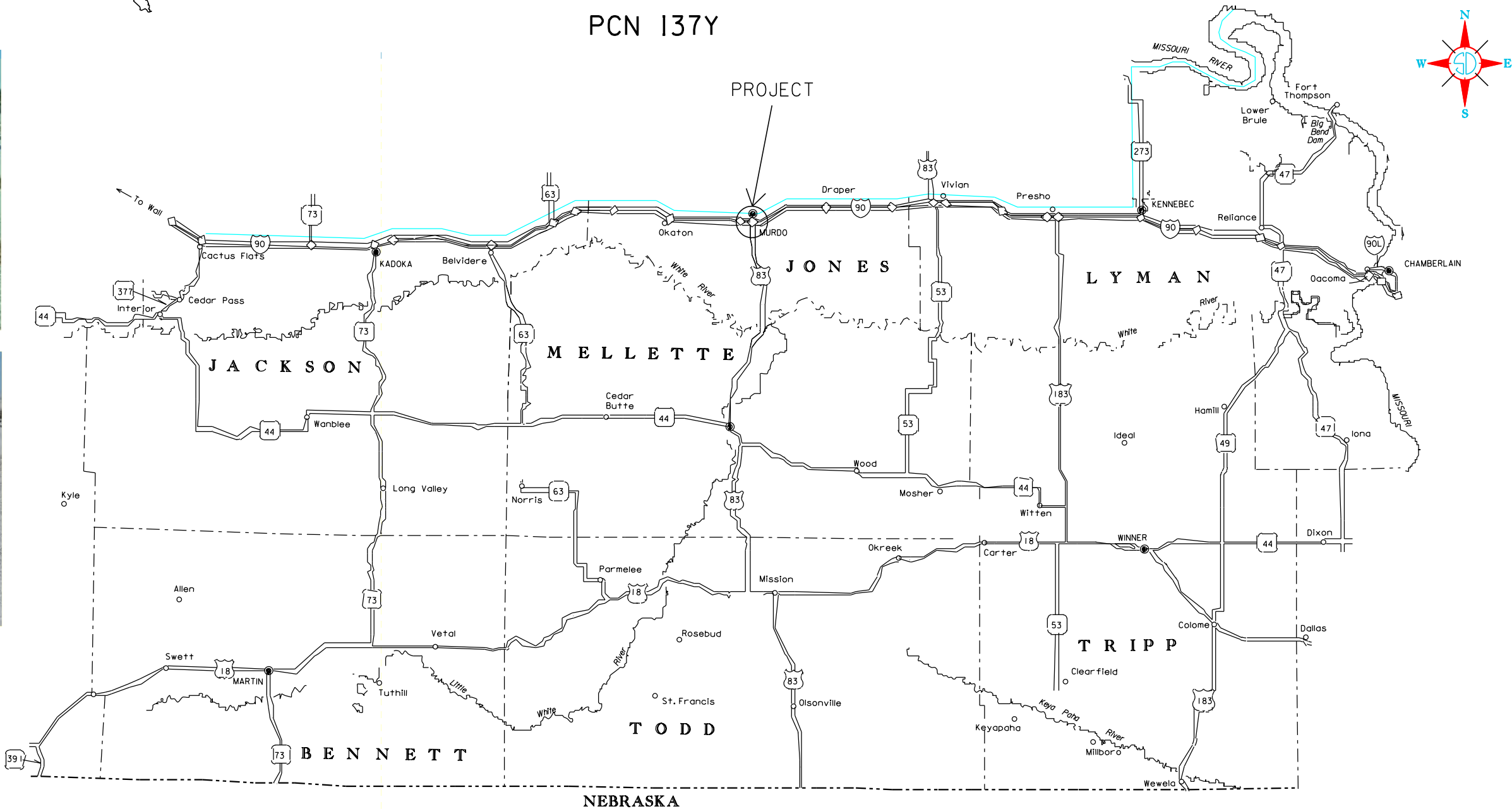
STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
PROJECT 090E-391 & 090W-391
INTERSTATE 90 EBL & WBL
JONES COUNTY
REPLACE CHAIN LINK FENCE
PCN 137Y

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090E-391 & 090W-391	1	9

Plotting Date: 04/02/2014

INDEX OF SHEETS

Sheet No.1	Title Sheet
Sheet Nos.2-5	Quantities & Plan Notes
Sheet No.6	Layout Sheet
Sheet Nos.7-9	Standard Plates



FILE - ... \DESIGN FILES\TITLE\137Y.DGN

PLOT NAME - 1

Estimate of Quantities

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E0605	Remove Chain Link Fence	6,809	Ft
621E0060	6' Chain Link Fence with Top Rail	4,832	Ft
621E0160	6' Chain Link Fence with Tension Wired Top	1,977	Ft
621E0430	Double Vehicular Swing Gate	1	Each
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2004 Edition and Required Provisions, Supplemental Specifications and/or Special Provisions as included in the Proposal.

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor shall furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the State ROW.

The waste disposal site(s) shall be managed and reclaimed in accordance with the following from the General Permit for Highway, Road, and Railway Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Environment and Natural Resources.

The waste disposal site(s) shall not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements shall apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials shall be buried in a trench completely separate from wood debris. The final cover over the construction and/or demolition debris shall consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the State ROW shall be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor shall control the access to waste disposal sites not within the State ROW through the use of fences, gates, and placement of a sign or signs at the entrance to the site stating “No Dumping Allowed”.
2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period of time not to exceed the duration of the project. Prior to project completion, the waste shall be removed from view of the ROW or buried and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) shall be incidental to the various contract items.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	090E-391 & 090W-391	3	9

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historical Preservation Office (SHPO or THPO) for all work included within the project limits and all designated option borrow sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require review of cultural resources impacts. This work includes, but is not limited to: staging areas, borrow sites, waste disposal sites, and all material processing sites.

The Contractor shall arrange and pay for a cultural resource survey and/or records search. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor shall provide ARC with the following: a topographical map or aerial view on which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor shall submit the records search or cultural resources survey report and if the location of the site is within the current geographical or historic boundaries of any South Dakota reservation to SDDOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3180). SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

If evidence for cultural resources is uncovered during project construction activities, then such activities shall cease and the Project Engineer shall be immediately notified. The Project Engineer will contact the SDDOT Environmental Engineer in order to determine an appropriate course of action.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for staging areas, borrow sites, waste disposal sites, or material processing sites that affect wetlands, threatened and endangered species, or waterways. The Contractor shall provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

GENERAL NOTES

Contractor shall furnish and install chain link fence system where shown on the drawings, and as needed for a complete and proper installation.

The concrete used on the project shall conform to the requirements of Class M6 concrete.

The Engineer shall approve all fencing materials prior to their installation.

The Contractor will be required to install extension arms and barbed wire according to Standard Plate 621.04 on sections designated in the table of chain link fence.

UTILITIES

The Contractor shall contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It shall be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

Utilities are not planned to be affected on this project. If utilities are identified near the improvement area through the SD One Call process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25; the Contractor shall contact the Project Engineer to determine modifications that will be necessary to avoid utility impacts.

GENERAL MAINTENANCE OF TRAFFIC

Removing, relocating, covering, salvaging and resetting of permanent traffic control devices, including delineation, shall be the responsibility of the Contractor. Cost for this work shall be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State.

Storage of vehicles and equipment shall be outside the clear zone and as near as possible to the right-of-way line. Contractor's employees should mobilize at a location off the right-of-way and arrive at the work sites in a minimum number of vehicles necessary to perform the work.

Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage to the vegetation, surfacing, embankment, delineators and existing signs resulting from such indiscriminate use shall be repaired and/or restored by the Contractor, at no expense to the State, and to the satisfaction of the Engineer. No driving on private property is allowed without permission from the adjacent landowner.

GENERAL MAINTENANCE OF TRAFFIC – CONTINUED

The Contractor shall provide documentation that all breakaway sign supports comply with FHWA NCHRP Report 350 or MASH crash-worthy requirements. The contractor shall provide installation details at the preconstruction meeting for all breakaway sign support assemblies. Cost for traffic control, including placement and movement of signs, shall be incidental to the contract lump sum price for “Traffic Control, Miscellaneous”.

All workers within the right of way shall wear a minimum of Class 2 approved safety apparel at all times.

CLEARING

Prior to installing the new chain link fence, the fence alignment shall be cleared of all trees, tree branches, tree stumps, brush, vegetation and debris. After clearing, the area shall be mowed, bladed and leveled to the satisfaction of the Engineer prior to the installation of the new chain link fence.

Clearing will be paid for at the contract lump sum price for “Clearing”. Payment shall be full compensation for labor and equipment necessary to clear the entire line for the fence, mow and level ground irregularities.

RESTORATION OF INSLOPES AND DITCHES

Any slope area or ditch that is rutted or otherwise unduly disturbed during fencing operations shall be restored and seeded by the Contractor, at no expense to the State. Cost for this work shall be incidental to the contract unit prices for the various items.

REMOVE FENCE

The Contractor shall remove the existing chain link fence that is to be replaced as designated in the plans and/or as ordered by the Engineer. Fence removed shall become the property of the Contractor. Salvaged material may be temporarily stored near the right of way line provided it is out of the clear zone of I90. Stockpiled material shall be removed from the project on a weekly basis.

The Contractor shall be responsible to contact all landowners along the project route prior to removing fence.

CONTROL OF ACCESS

This highway is a “Control of Access” highway as adopted by the South Dakota Transportation Commission. Access points to be limited to those shown on the construction plans except any additional that are required as a result of Right of Way acquisition.

The Contractor is responsible to control access throughout the project. If the contractor elects to use temporary fence to control access or to accommodate livestock, the cost of the temporary fence shall be incidental to the contract unit prices for the various items.

DOUBLE VEHICULAR SWING GATE

A new 32’ Double Vehicular Swing Gate shall be installed at the same location as the existing gate leading into the DOT Maintenance Yard in Murdo.

The Contractor shall refer to the additional requirements of this contract listed below:

Gate Hardware: Provide the following for each gate:

- A. Hinges:
 - 1. Pressed steel, forged steel, or malleable iron to suit the gate size; non-lift-off type, offset to permit 180 degree opening.
- B. Latches:
 - 1. Provide forked type or plunger-bar type to permit operation from either side of the gate.
 - 2. Provide padlock eye as integral part of latch.
- C. Keeper: Provide keeper for hinged vehicle gates, which automatically engages the gate leaf and holds it in the open position until manually released.
- D. Double hinged gates:
 - 1. Provide gate stops for double hinged gates consisting of mushroom or flush plate, with anchors.
 - 2. Set in concrete to engage the center drop rod or plunger bar.
 - a. Provide locking device and padlock eyes as an integral part of the latch, requiring one padlock for locking both gates leaves.

CHAIN LINK FENCE

New fence shall be installed along the same alignment as the removed fence unless otherwise directed by the Engineer. It shall be the responsibility of the Contractor to mark the existing alignment.

The Contractor shall refer to Section 621 of the Standard Specifications.

The Contractor shall refer to the additional requirements of this contract listed below:

Installing Chain Link Fence:

- A. Concrete Strength:

1. Allow concrete to attain at least 75% of its minimum 28-day strength before rails, tension wire, and/or fabric is installed.

2. Do not, in any case, install such items in less than seven days after placement of concrete.

3. Do not stretch and tension fabric and wire or hang gates, until concrete has attained its full design strength.
- B. Rails and bracing:

1. Provide expansion couplings as recommended by the fencing manufacturer.

2. Provide bracing to the midpoint of the nearest line post or posts at all end, corner, slope, pull, and gate posts.

Table of Fence Quantities				
Fence Site	Remove Fence (Ft)	6' Chain Link Fence with Top Rail (Barbed Wire Top) (Ft)	6' Chain Link Fence with Tension Wired Top (Ft)	Comments/Fence type changes
WB I90	2647	2647		Interstate 90 beginning on the North side at approximately MRM 191.14 to Exit 192 along on ramp. Remove 2647' of existing chain link fence with top rail and barbed wire top and install 2647' of new 6' chain link fence with top rail and barbed wire top.
US83	180	180		Exit 192 Northwest ramp. Beginning at the intersection with the I90 chain link fence, North 180'. Remove 180' of existing chain link fence with top rail and barbed wire top and install 180' of new 6' chain link fence with top rail and barbed wire top.
EB I90	1977		1977	Interstate 90 beginning on the south side at MRM 191.14 to MRM 191.51 (Northwest corner of DOT Maintenance yard in Murdo). Remove 1977' of existing chain link fence with top rail and barbed wire top and install 1977' of new 6' chain link fence with tension wired top.
EB I90	735	735		Interstate 90 beginning on the south side at MRM 191.51 to MRM 191.65. Remove 735' of existing chain link fence with top rail and barbed wire top and install 735' of new 6' chain link fence with top rail and barbed wire top.
US 83	1270	1270		Beginning at the Northeast corner of the DOT maintenance yard in Murdo, South along US83 to the Southeast corner of the maintenance yard. Remove 1270' of existing chain link fence with top rail and barbed wire top and install 1270' of new 6' chain link fence with top rail and barbed wire top.
TOTAL	6809	4832	1977	

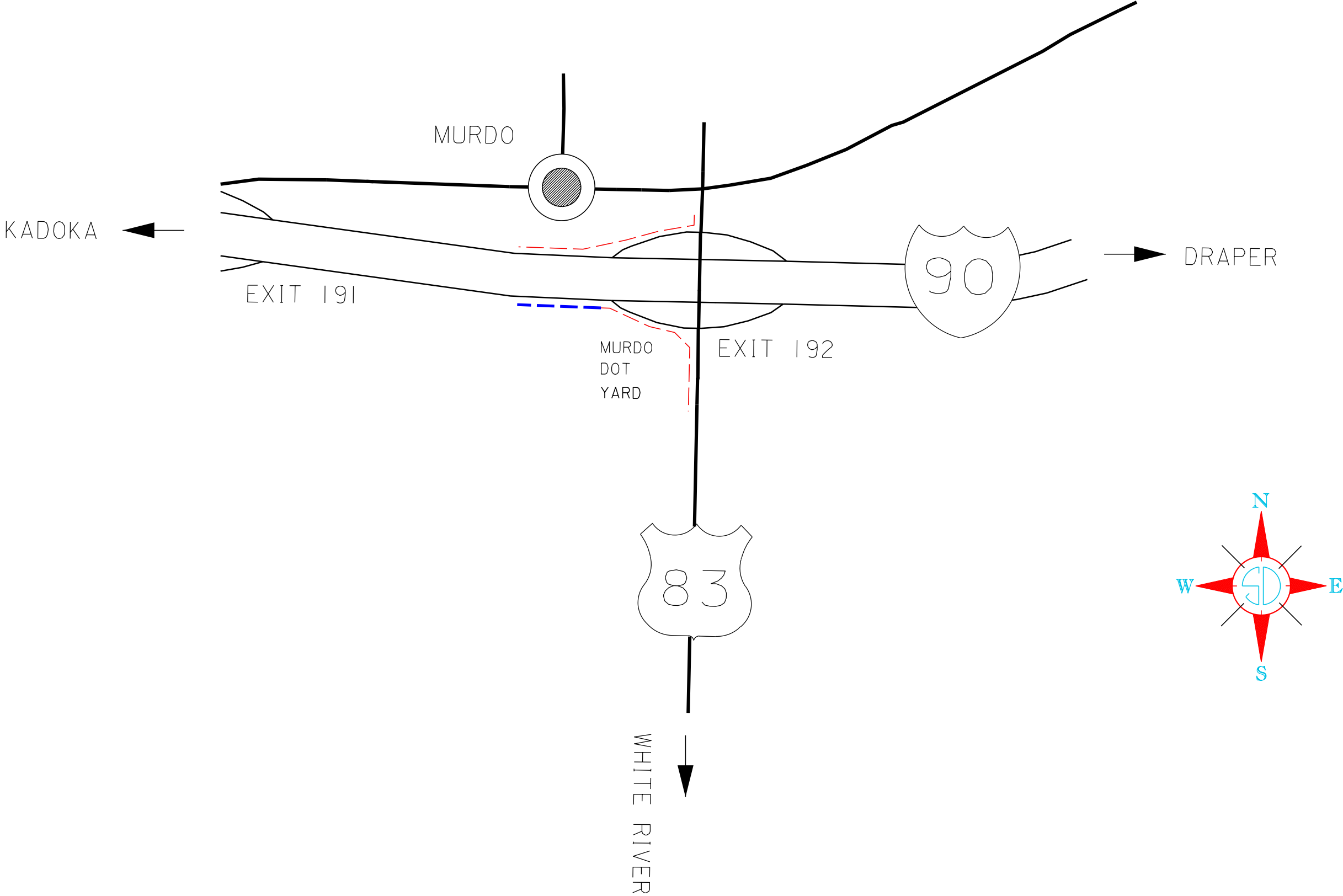
PLOT SCALE - 1:25616.3

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090E-391 & 090W-391	6	9

Plotting Date: 03/31/2014

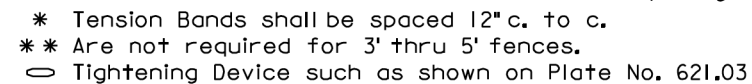
CHAIN LINK FENCE LAYOUT



Remove Existing Chain Link Fence & Install New
6' Chain Link Fence with Top Rail and Barbed Wire Top

Remove Existing Chain Link Fence & Install New
6' Chain Link Fence with Tension Wired Top

FILE - ... \DESIGN FILES\LAYOUT - COPY.DGN PLOT NAME - 1



GENERAL NOTES:

"H" (Height of Fabric) shall be as shown on the Plans. Fabric is available in the the following heights; 36", 42", 48", 60", 72", 84", 96", 108", 120", & 144". Fabric heights 60 inches and under shall be knuckled at both selvages. Fabric heights 72 inches and over shall be knuckled at one selvage and twisted at the other selvage.

Fence may be constructed with either Round Pipe, "C" Section, "H" Beam, or roll Formed Steel components as shown in the table above. Line post may be Round Pipe, "C" Section, or "H" Beam. The Corner Post and Rails shall be either Round Pipe or Roll Formed Steel. The type of components used shall have prior approval by the Engineer before construction.

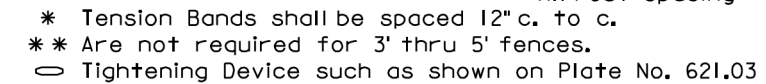
A suitable method of rail splicing shall be used to allow for expansion and contraction while maintaining proper position of the Top Rail.

March 31, 2000

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PLATE NUMBER
621.01

Sheet 1 of 1



GENERAL NOTES:

"H" (Height of Fabric) shall be as shown on the Plans. Fabric is available in the following heights; 36", 42", 48", 60", 72", 84", 96", 108", 120", & 144". Fabric heights 60 inches and under shall be knuckled at both selvages. Fabric heights 72 inches and over shall be knuckled at one selvage and twisted at the other selvage.

Fence may be constructed with either Round Pipe, "C" Section, "H" Beam, or roll Formed Steel components as shown in the table above. Line post may be Round Pipe, "C" Section, or "H" Beam. The Corner Post and Rails shall be either Round Pipe or Roll Formed Steel. The type of components used shall have prior approval by the Engineer before construction.

Where fence must cross small bodies of water (such as drainage areas or ponds) that could freeze during the winter, use 11 gage Hog Rings. Provide only two ties per Tension Wire and Top Rail between line posts.

March 31, 2000

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PLATE NUMBER
621.02

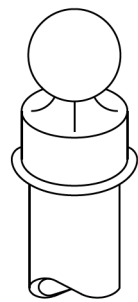
Sheet 1 of 1

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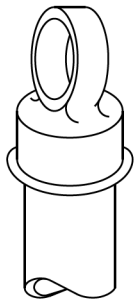
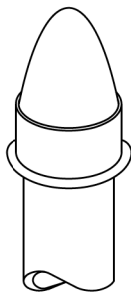
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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090E-391 & 090W-391	8	9

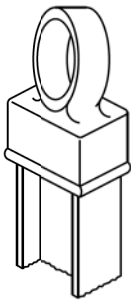
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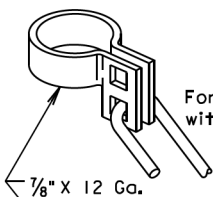
For End, Corner
and Pull Posts



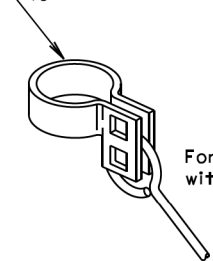
For Line Posts



Typical Post Tops
(Shown for example only)

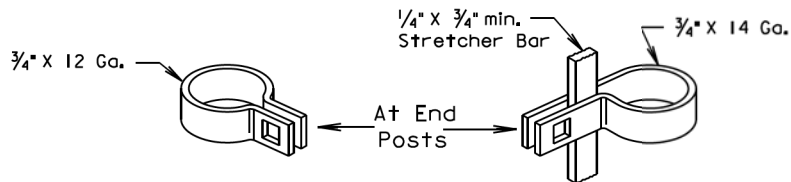


For use
without Bolt

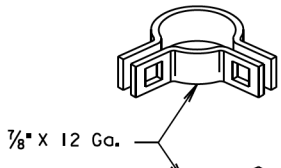


For use
with Bolt

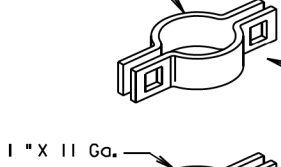
Brace & Truss Bands



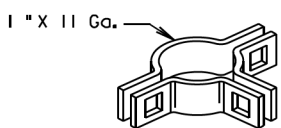
At End
Posts



At Corner
Posts



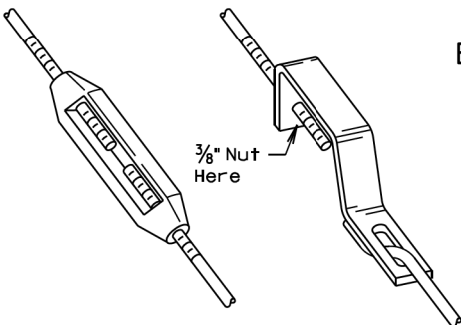
At Line
Pull Posts



Three Way

Brace Bands

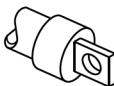
Tension Bands



3/8" Turnbuckle

11 Ga. Tightener

Tightening Devices



Straight Tip



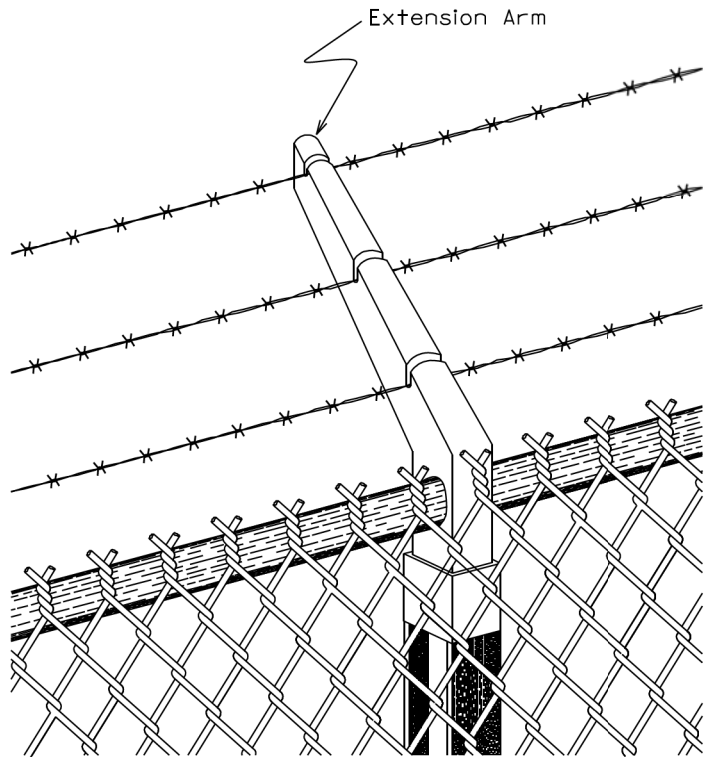
Offset Tip

Rail Ends

NOTE: Bands shall be rectangular for
"C" Section and "H" Beam Posts.

March 31, 2000

Published Date: 1st Qtr. 2014	S D D O T	HARDWARE FOR CHAIN LINK FENCE	PLATE NUMBER 621.03
			Sheet 1 of 1



GENERAL NOTES:

Extension arms shall be hot dipped galvanized. End and corner arms shall be malleable iron. Intermediate arms may be pressed steel. Arms shall have sealed caps and three slots to accommodate the barbed wires. The top wire shall be 12 inches above the fabric and 12 inches out from the fence line at an angle of approximately 45°. Adjustable arms may be used. Barbed wire shall be two strand 12 1/2 gauge wire with four point round barbs spaced on 5 inch centers.

Extra payment will not be made for extension arms with barbed wire. Extension arms with barbed wire shall be incidental to the respective "Chain Link Fence" bid item. When extension arms with barbed wire are attached to gates, the payment for the extension arms with barbed wire shall be incidental to the respective "Gate" bid item.

March 31, 2000

Published Date: 1st Qtr. 2014	S D D O T	BARBED WIRE TOP FOR CHAIN LINK FENCE	PLATE NUMBER 621.04
			Sheet 1 of 1

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Gate Opening Width 1	Hinge Post		Concrete Footing	
	Round Pipe Nominal	Roll Formed Steel	Depth	Diameter
3' to 6'	3.00"	3.50"X3.50"	36"	12"
> 6' to 13'	4.00"	—	42"	12"
> 13' to 18'	6.625"	—	48"	18"
> 18' to 23'	8.625"	—	48"	24"

- * Are not required for gates 3' to 5' height or 5' or less in width.
- ** Tension Bands shall be spaced 12" c. to c.
- Tightening Device such as shown on standard plate 621.03
 - 1 Leaf width for Double Vehicular Swing Gate
 - 2 Shall coincide with fence height

September 14, 2001

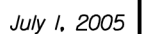
SWING GATES FOR CHAIN LINK FENCE

PLATE NUMBER
621.10

Sheet 1 of 1

Published Date: 1st Qtr. 2014

For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.



GUIDES FOR TRAFFIC CONTROL DEVICES WORK BEYOND THE SHOULDER

PLATE NUMBER
634.01

Sheet 1 of 1

Published Date: 1st Qtr. 2014